

Notice of Allowability

Application No.

10/720,082

Examiner

Stephen G. Sherman

Applicant(s)

KITAGAWA, DAISAKU

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed the 27 September 2006.
2. ☒ The allowed claim(s) is/are 1-13.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jeffrey Filipek on the 27 October 2006.

2. The application has been amended as follows:

Please amend claim 1 as follows:

1. An image display control apparatus that controls light transmittance of liquid crystals of a liquid crystal display screen for displaying an image based on an inputted image signal and controls, according to the light transmittance of the liquid crystals, an amount of light emitted by a backlight unit for illuminating a back of the liquid crystal display screen based on the image signal, the image display control apparatus comprising:

an image state detection unit operable to detect a state of the image based on the image signal;

an image signal transformation unit operable to transform the image signal by performing predetermined signal processing on said image signal based on the state of the image detected by the image state detection unit, and control the light transmittance of the liquid crystals based on the transformed image signal; and

a resource control unit operable to:

assign an arithmetic operation resource, which performs an arithmetic operation, to the image state detection unit, instead of to the image signal transformation unit, at a predetermined time when the image state detection unit is to use the arithmetic operation resource; and

assign the arithmetic operation resource to the image signal transformation unit, instead of to the image state detection unit, at a predetermined time when the image signal transformation unit is to use the arithmetic operation resource, which is different than the predetermined time when the image state detection unit is to use the arithmetic operation resource.

wherein the image state detection unit detects the state of the image using the assigned arithmetic operation resource, and

the image signal transformation unit transforms the image signal using the assigned arithmetic operation resource.

Please amend claim 10 as follows:

10. An image display control method executed by an image display control apparatus that controls light transmittance of liquid crystals of a liquid crystal display screen for displaying an image based on an inputted image signal and controls, according to the light transmittance of the liquid crystals, an amount of light emitted by a backlight unit for illuminating a back of the liquid crystal display screen based on the image signal, the image display control method comprising:

- an image state detection step of detecting a state of the image based on the image signal;

- an image signal transformation step of transforming the image signal by performing predetermined signal processing on said image signal based on the state of the image detected in the image state detection step, and controlling the light transmittance of the liquid crystals based on the transformed image signal; and

- a resource control step of:

- assigning an arithmetic operation resource, which performs an arithmetic operation, to an image state detection unit operable to execute the image state detection step, instead of to an image signal transformation unit operable to execute the image signal transformation step, at a predetermined time when the image state detection unit is to use the arithmetic operation resource; and

- assigning the arithmetic operation resource to the image signal transformation unit, instead of to the image state detection unit, at a predetermined time when the image signal transformation unit is to use the arithmetic operation resource, which is

different than the predetermined time when the image state detection unit is to use the arithmetic operation resource,

wherein in the image state detection step, the image state detection unit detects the state of the image using the assigned arithmetic operation resource, and

in the image signal transformation step, the image signal transformation unit transforms the image signal using the assigned arithmetic operation resource.

Please amend claim 12 as follows:

12. A program, embodied on a computer-readable medium, executed by an image display control apparatus that controls light transmittance of liquid crystals of a liquid crystal display screen for displaying an image based on an inputted image signal and controls, according to the light transmittance of the liquid crystals, an amount of light emitted by a backlight unit for illuminating a back of the liquid crystal display screen based on the image signal, the program causing the image display control apparatus to execute:

an image state detection step of detecting a state of the image based on the image signal;

an image signal transformation step of transforming the image signal by performing predetermined signal processing on said image signal based on the state of the image detected in the image state detection step, and controlling the light transmittance of the liquid crystals based on the transformed image signal; and

a resource control step of:

assigning an arithmetic operation resource, which performs an arithmetic operation, to an image state detection unit operable to execute the image state detection step, instead of to an image signal transformation unit operable to execute the image signal transformation step, at a predetermined time when the image state detection unit is to use the arithmetic operation resource; and

assigning the arithmetic operation resource to the image signal transformation unit, instead of to the image state detection unit, at a predetermined time when the image signal transformation unit is to use the arithmetic operation resource, which is different than the predetermined time when the image state detection unit is to use the arithmetic operation resource.

wherein in the image state detection step, the image state detection unit detects the state of the image using the assigned arithmetic operation resource, and

in the image signal transformation step, the image signal transformation unit transforms the image signal using the assigned arithmetic operation resource.

Please amend claim 13 as follows:

13. An image display apparatus comprising:

a liquid crystal display screen operable to display an image;

a backlight unit operable to illuminate a back of the liquid crystal display screen;

an image display control apparatus that controls light transmittance of liquid crystals of the liquid crystal display screen based on an inputted image signal and controls, according to the light transmittance of the liquid crystals, an amount of light emitted by the backlight unit based on the image signal,

wherein the image display control apparatus includes:

an image state detection unit operable to detect a state of the image based on the image signal;

an image signal transformation unit operable to transform the image signal by performing predetermined signal processing on said image signal based on the state of the image detected by the image state detection unit, and control the light transmittance of the liquid crystals based on the transformed image signal; and

a resource control unit operable to:

assign an arithmetic operation resource, which performs an arithmetic operation, to the image state detection unit, instead of to the image signal transformation unit, at a predetermined time when the image state detection unit is to use the arithmetic operation resource; and

assign the arithmetic operation resource to the image signal transformation unit, instead of to the image state detection unit, at a predetermined time when the image signal transformation unit is to use the arithmetic operation resource, which is different than the predetermined time when the image state detection unit is to use the arithmetic operation resource.

wherein the image state detection unit detects the state of the image using the assigned arithmetic operation resource, and

the image signal transformation unit transforms the image signal using the assigned arithmetic operation resource.

3. The following changes to the drawings have been approved by the examiner and agreed upon by applicant: A "Prior Art" label addition to Figure 1. In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen G. Sherman whose telephone number is (571) 272-2941. The examiner can normally be reached on M-F, 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SS

30 October 2006

AMR A. AWAD
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read "Amr A. Awad", with a long, sweeping horizontal stroke extending to the right.